

Indian Institute of Technology, Goa

School of Mathematics and Computer Science



Semester 4 **CS 415 Assignment 1**

Topic : Sutherland-Hodgeman polygon clipping algorithm

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Q2.

Given a polygon with N vertices, and a rectangular window, clip the polygon against clipping window using Sutherland–Hodgeman polygon clipping algorithm. You are expected to use mouse clicks to get your inputs and render the drawing primitives on the canvas using OpenGL API. Your program is to be called using the menu button.

How to Run:

- 1) First run the program in your local system (Visual studio).
- 2) Left click on a box on the left to select a primitive [point, line, clipping rectangle, polygon]
- 3) Then left click on the drawing area:
 - 1) For setting up the polygon clipping window select two endpoints of the rectangle by mouse clicks.
 - 2) For drawing a polygon click any random number of points where you want to select vertices and for drawing a polygon, click n number of times on different drawing areas if you want a polygon of n sides.
- 4) For running the simulation you can just right click and click on "Run Simulation" then you will see a polygon clipped inside the rectangle.

Image:

